A Preliminary Study Investigating Functional Movement Screen Test Scores in Novice and Advanced Female Show Jumping Riders

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Comparison of Functional Movement Screening Scores between novice and advanced show jumping riders

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INTRODUCTION: The functional movement screen (FMS) is an easily administered and non-invasive tool to identify areas of weakness and asymmetry during specific exercises. FMS is a common method of athlete screening in many sports and is used to ascertain injury risk, but has yet to be used within equestrian show jumping population

AIM: The aim of this study was to establish FMS scores for novice and advanced show jumping riders, and to inform a normative data set of FMS scores in horse riders in the future.

METHOD: Twenty-three female show jumping horse riders (mean age 21.5) participated in the study. Twelve participants that competed at 80cm or less were classed as novice, and 10 that competed at 125cm were classed as advanced. All participants were assessed based on their performance on a 7-point FMS (deep squat, hurdle step, in-line lunge, shoulder mobility, active straight leg raise, trunk stability and rotary stability). Each movement is scored 0-3. Cumulative score out of 21. A score of 14 or below suggests an increase risk of injury.

RESULTS: The mean composite FMS scores (± s.d.) for the novice group was 12.08 ± 1.9 and for the advanced riders was 14.8 ± 1.77. There was no significant difference in median FMS composite scores between the novice rider and advanced rider groups (Mann-Whitney U test, p=0.004).

CONCLUSION: Both groups had a mean composite score of 14 or below suggesting these riders are at risk of injury. Riders' FMS scores demonstrated asymmetric movement patterns potentially limiting left lateral movement. Asymmetry has a potential impact on equestrian performance, limiting riders' ability to apply the correct cues to the horse. The findings of such screening could inform the development of axillary training programmes to correct asymmetry pattern and target injury prevention.

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